

REMARKS

Summary of the Office Action

1. Claims 36-40 are rejected under 36 U.S.C. 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter of the invention.
2. Claims 1, 2, 6-17, 23-26 and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by *Wisor et al.* (U.S. 5,442,794).
3. Claim 41 is rejected under 25 U.S.C. 102(e) as being anticipated by *Wong-Insley* (U.S. 6,131,166).
4. Claims 3-5 and 27-29 are indicated as having allowable subject matter.
5. Claims 18-22 are allowed.

Summary of the Response

Applicant thanks the Examiner for a timely and thorough examination.

Applicant has elected to amend the claims so that all the pending claims now include subject matter that was indicated as being allowable in the last Office Action.

Accordingly, claim 1 has been amended to be a Markush claim containing subject matter from claims 3, 4 and 5. Since claims 3, 4 and 5 were indicated as containing allowable subject matter, Applicant assumes that amended claim 1 is allowable.

Claims 18-22 were allowable in the last Office Action. Therefore, no amendments were made to these claims.

Claim 23, 25, 26 and 27 were combined into claim 23. This combination was indicated as being allowable in the last Office Action.

Claim 28 and claim 29 are each recast into independent form by being combined with claims 23, 23 and 26. These combinations were also indicated as being allowable in the last Office Action.

Claims 24, and 30-33 were recopied as new claims 42-46 and new claims 47-51. Claims 42-46 depend from claim 28, which has been recast into independent form. Claims 47-51 depend from claim 29, which has also been recast into independent form.

Rejections Under 35 U.S.C. §112

The rejection to claims 36-40 under §112 is now moot, as those claims were cancelled.

Rejection Under 35 U.S.C. §102

The rejection to claims 1-2, 6-17, 23-26, and 30-41 is also moot. Applicant has elected to pursue only claims with subject matter indicated as being allowable. Applicant makes no statement regarding the merit of the rejections in the last Office Action.

CONCLUSION

Applicants respectfully submit that all pending claims are patentable over the art of record. Accordingly, a Notice of Allowance is requested by Applicants. Applicants urge the Examiner to telephone Applicants' attorney at (408) 414-1209 if any issues remain that preclude allowance of the application. The Office is given permission to charge any unpaid fees to Applicants' deposit account (50-1302).

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

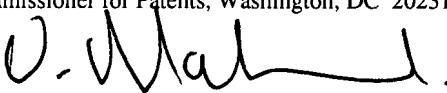
Dated: 12-27-02


Van Mahamed, Reg. No. 42,828

1600 Willow Street
San Jose, California 95125-5106
Telephone No.: (408) 414-1080
Facsimile No.: (408) 414-1076

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Box Amend, Commissioner for Patents, Washington, DC 20231.

on December 27, 2002 by 
(Date) (Signature)

"Version with markings to show changes made"

In the Claims:

1. (Amended) A method for managing power in a handheld computer, the handheld computer having a sleep mode setting and comprising a battery, at least one input device for turning the handheld computer on, and at least one device for detecting a battery power level, the method comprising:
receiving an input signal to turn the handheld computer on;
determining whether the handheld computer is in the sleep mode;
accessing the device for detecting the battery power level if the handheld computer is in the sleep mode;
responsive to detecting the battery power level, comparing the detected battery power level to a first predetermined power level that is selected from a group of power levels consisting of (i) a power level that occurs on or about one week prior to the handheld computer losing data stored in a memory of the handheld computer, (ii) a power level that is based on measuring an ambient temperature of the handheld computer, and (iii) a power level that is based on about 3.71 volts; and
maintaining the handheld computer in the sleep mode if the detected battery power level is less than the first predetermined power level.
2. (No Change) The method of claim 1, wherein accessing the device for detecting the battery power level is carried out by an analog-to-digital converter device.
3. (Cancel) 
4. (Cancel) 
5. (Cancel) 

6. (No Change) The method of claim 1, wherein maintaining the sleep mode comprises:
receiving an input signal for turning on power in the handheld computer;
responding to the input signal by determining whether the handheld computer is in a
sleep mode; and
responsive to determining that the handheld computer is in a sleep mode, masking
interrupt signals for powering one or more applications and devices of the
handheld computer.
7. (No Change) The method of claim 6, wherein;
masking interrupt signals for powering the one or more applications and devices of
the handheld computer includes masking interrupt signals for powering one or
more applications and devices which provide a feedback to the user that the
handheld computer is operational.
8. (No Change) The method of claim 7, wherein masking interrupt signals for powering
the one or more applications and devices which provide a feedback to the user that the
handheld computer is operational includes masking interrupt signals for powering a
display device.
9. (No Change) The method of claim 7, wherein masking interrupt signals for powering
the one or more applications and devices which provide a feedback to the user that the
handheld computer is operational includes masking interrupt signals for powering a
communications device.
10. (Cancel) 
11. (Cancel) 
12. (Cancel) 

13. (Cancel) 

14. (Cancel) 

15. (Cancel) 

16. (Cancel) 

17. (Cancel) 

18. (No Change) A method for managing power in a handheld computer having a sleep mode setting, the handheld computer comprising a battery, at least one input device for turning the handheld computer on, and at least one device for detecting a battery power level, the method comprising:
- replenishing the primary energy source;
- receiving an input signal to turn the handheld computer on;
- determining whether the handheld computer is in the sleep mode;
- accessing the device for detecting the battery power level if the handheld computer is in the sleep mode;
- responsive to detecting the battery power level, comparing the detected battery power level to a first predetermined power level;
- comparing the detected battery power level to a second predetermined power level if the detected battery power level is greater than the first predetermined power level; and
- exiting the sleep mode when the detected battery power level is greater than the second predetermined power level.

19. (No Change) The method of claim 18, wherein the battery of the handheld computer is a rechargeable battery, replenishing the primary energy source comprising:

recharging the rechargeable battery.

20. (No Change) The method of claim 18, wherein the battery of the handheld computer is a non-rechargeable battery, replenishing the primary energy source comprising: replacing the non-rechargeable battery.
21. (No Change) The method of claim 18, wherein the exiting the sleep mode occurs when the detected battery power level is greater than a second predetermined voltage of on or about 0.10 volts higher than the first predetermined voltage.
22. (No Change) The method of claim 18, wherein the exiting the sleep mode occurs when the detected battery power level is greater than a second predetermined voltage of on or about 3.81 volts.
23. (Amended) An apparatus for reserving power in a handheld computer, the handheld computer having a sleep mode setting, a battery as a primary energy source, at least one input device for turning on power, and at least one device for detecting a battery power level, the handheld computer including a subsystem, wherein the subsystem comprises a processor coupled to a interrupt controller and a memory controller, the interrupt controller coupled to a memory, the memory including a sleep mode software and a residual energy manager module, and wherein the subsystem is coupled to the device for detecting a battery power level, the apparatus comprising: responsive to receiving an input signal to turn device power on, means for accessing the sleep mode setting;
responsive to determining that the handheld computer is in the sleep mode, means for accessing the device for detecting the battery power level; and
responsive to the detected battery power level, means for maintaining the sleep mode or exiting the sleep mode;

responsive to detecting a battery power level, means comparing the detected battery power level to a first predetermined power level; and

responsive to determining the detected battery power level is less than the first predetermined power level, means for maintaining the handheld computer in the sleep mode;

wherein the first predetermined power level is set at a level which provides on or about seven days of a normal usage of the handheld computer prior to the handheld computer losing data stored in a memory of the handheld computer.

24. (Amended) The apparatus of claim 23, wherein:

the device for detecting the battery power level includes an analog-to-digital converter.

25. (Cancel) ✓

26. (Cancel) ✓

27. (Cancel) ✓

28. (Amended) [The apparatus of claim 26, further comprising:] An apparatus for reserving power in a handheld computer, the handheld computer having a sleep mode setting, a battery as a primary energy source, at least one input device for turning on power, and at least one device for detecting a battery power level, the handheld computer including a subsystem, wherein the subsystem comprises a processor coupled to a interrupt controller and a memory controller, the interrupt controller coupled to a memory, the memory including a sleep mode software and a residual energy manager module, and wherein the subsystem is coupled to the device for detecting a battery power level, the apparatus comprising:

responsive to receiving an input signal to turn device power on, means for accessing
the sleep mode setting;

responsive to determining that the handheld computer is in the sleep mode, means for
accessing the device for detecting the battery power level; and
responsive to the detected battery power level, means for maintaining the sleep mode
or exiting the sleep mode;

responsive to detecting a battery power level, means comparing the detected battery
power level to a first predetermined power level; and
responsive to determining the detected battery power level is less than the first
predetermined power level, means for maintaining the handheld computer in the
sleep mode;

a thermal sensor; and

means for setting the first predetermined power level based on the thermal sensor
detecting an ambient temperature of the handheld computer.

29. (Amended) [The apparatus of claim 26, further comprising:] An apparatus for
reserving power in a handheld computer, the handheld computer having a sleep mode
setting, a battery as a primary energy source, at least one input device for turning on
power, and at least one device for detecting a battery power level, the handheld
computer including a subsystem, wherein the subsystem comprises a processor
coupled to a interrupt controller and a memory controller, the interrupt controller
coupled to a memory, the memory including a sleep mode software and a residual
energy manager module, and wherein the subsystem is coupled to the device for
detecting a battery power level, the apparatus comprising:
responsive to receiving an input signal to turn device power on, means for accessing
the sleep mode setting;

responsive to determining that the handheld computer is in the sleep mode, means for

accessing the device for detecting the battery power level; and

responsive to the detected battery power level, means for maintaining the sleep mode

or exiting the sleep mode;

responsive to detecting a battery power level, means comparing the detected battery

power level to a first predetermined power level; and

responsive to determining the detected battery power level is less than the first

predetermined power level, means for maintaining the handheld computer in the

sleep mode;

wherein the first predetermined power level is on or about 3.71 volts.

30. (Amended) The apparatus of claim 23 [26], further comprising:

responsive to receiving an input signal for turning on power in the handheld

computer, means for determining whether the handheld computer is in a sleep

mode; and

responsive to determining that the handheld computer is in a sleep mode, means for

operating the interrupt controller to mask interrupt signals for powering one or

more applications and devices of the handheld computer.

31. (No Change) The apparatus of claim 30, wherein the one or more applications and devices of the handheld computer includes an application or device which provides a feedback to the user that the handheld computer is operational.

32. (No Change) The apparatus of claim 31, wherein the one or more applications and devices of the handheld computer includes a display device.

33. (No Change) The apparatus of claim 31, wherein the one or more applications and devices of the handheld computer includes a communications device.

34. (Cancel)
35. (Cancel)
36. (Cancel)
37. (Cancel)
38. (Cancel)
39. (Cancel)
40. (Cancel)
41. (Cancel)
42. (New) The apparatus of claim 28, wherein:
the device for detecting the battery power level includes an analog-to-digital converter.
43. (New) The apparatus of claim 28, further comprising:
responsive to receiving an input signal for turning on power in the handheld computer, means for determining whether the handheld computer is in a sleep mode; and
responsive to determining that the handheld computer is in a sleep mode, means for operating the interrupt controller to mask interrupt signals for powering one or more applications and devices of the handheld computer.
44. (New) The apparatus of claim 43, wherein the one or more applications and devices of the handheld computer includes an application or device which provides a feedback to the user that the handheld computer is operational.

45. (New) The apparatus of claim 44, wherein the one or more applications and devices of the handheld computer includes a display device.
46. (New) The apparatus of claim 44, wherein the one or more applications and devices of the handheld computer includes a communications device.
47. (New) The apparatus of claim 29, wherein:
the device for detecting the battery power level includes an analog-to-digital converter.
48. (New) The apparatus of claim 29, further comprising:
responsive to receiving an input signal for turning on power in the handheld computer, means for determining whether the handheld computer is in a sleep mode; and
responsive to determining that the handheld computer is in a sleep mode, means for operating the interrupt controller to mask interrupt signals for powering one or more applications and devices of the handheld computer.
49. (New) The apparatus of claim 48, wherein the one or more applications and devices of the handheld computer includes an application or device which provides a feedback to the user that the handheld computer is operational.
50. (New) The apparatus of claim 49, wherein the one or more applications and devices of the handheld computer includes a display device.
51. (New) The apparatus of claim 49, wherein the one or more applications and devices of the handheld computer includes a communications device.